Applicant(s):
 Horst Mueller
 Attorney Docket No.: 68002-007US1

 Serial No.:
 10/567,616
 Client Ref. No.: 123/03006US

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Amendments to the claims:

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of claims:

- 1. (Previously presented) Emulsifier-free microgel dispersed in the aqueous phase obtainable by a) producing a polyacrylate (A) in the presence of at least one compound (B) exhibiting a phosphonic acid group, the polyacrylate (A) exhibiting at least one hydroxyl group and at least one carboxyl group; b) crosslinking, in the aqueous phase, of the reaction mixture originating from step a) with an aminoplast resin (C) to form the emulsifier-free microgel; the emulsifier-free microgel characterised in that the reaction mixture originating from step b) is not subjected to any subsequent emulsion polymerisation.
- 2. (Original) Microgel according to claim 1 wherein the polyacrylate (A) resulting from step a) is subjected, before step b), to an emulsion polymerisation with at least one monomer compound (D) which contains at least one free radical polymerisable double bond.
- 3. (Original) Microgel according to claim 1 wherein the polyacrylate (A) is obtainable by the polymerisation of a monomer (i) with at least one polymerisable double bond and at least one hydroxyl group; of a monomer (ii) with at least one polymerisable double bond and at least one carboxyl group; and of a monomer (iii) without hydroxyl group and without carboxyl group with at least one polymerisable double bond.
- 4. (Withdrawn) Emulsifier-free microgel dispersed in the aqueous phase obtainable by a) producing a polyacrylate (A) in the presence of at least one compound (B), the polyacrylate (A) exhibiting at least one hydroxyl group and at least one carboxyl

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group; b) crosslinking, in the aqueous phase, of the reaction mixture originating from step a) with an aminoplast resin (C) to form the emulsifier-free microgel; wherein compound (B) is an adduct of an alkyl phosphonic acid with a compound containing epoxy groups and the emulsifier-free microgel is characterised in that the reaction mixture originating from step b) is not subjected to any subsequent emulsion polymerisation.

- 5. (Previously presented) Emulsifier-free microgel dispersed in the aqueous phase obtainable by a) a producing a polyacrylate (E) by the copolymerisation of a monomer (i) with at least one polymerisable double bond and at least one hydroxyl group; of a monomer (ii) with at least one polymerisable double bond and at least one carboxyl group; and of a monomer (iv) with at least one polymerisable double bond and at least one phosphonic acid group; b) crosslinking, in the aqueous phase, of the reaction mixture originating from step a) with an aminoplast resin (C) to form the emulsifier-free microgel; the emulsifier-free microgel characterised in that the reaction mixture originating from step b) is not subjected to any subsequent emulsion polymerisation.
- 6. (Original) Microgel according to claim 5 wherein the polyacrylate (E) resulting from step a) is subjected, before step b), to an emulsion polymerisation with at least one monomer compound (D) which contains at least one free radical polymerisable double bond.
- 7. (Original) Microgel according to claim 5 wherein the copolymerisation is carried out in the presence of an additional monomer (iii) without hydroxyl group and without carboxyl group, which monomer exhibits at least one polymerisable double bond.
- 8. (Original) Microgel according to claim 3 wherein the monomer (i) is selected from the group of hydroxyethyl(meth)acrylate, hydroxypropyl(meth)acrylate, hydroxybutyl(meth)acrylate and caprolactone esterified on the basis of hydroxy(meth)acrylate.

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9. (Original) Microgel according to claim 3 wherein the monomer (ii) is selected from the group of acrylic acid and methacrylic acid.

- 10. (Previously presented) Microgel according to claim 3 wherein the monomer (iii) is selected from the group of acrylic or (meth)acrylic acid esters free from hydroxyl groups, and styrene.
- 11. (Original) Microgel according to claim 5 wherein the monomer (iv) is vinyl phosphonic acid.
- 12. (Original) Microgel according to claim 1 wherein the aminoplast resin is a melamine resin.
- 13. (Original) Microgel according to claim 2 wherein at least one monomer compound (D) contains no hydroxyl groups.
- 14. (Original) Microgel according to claim 13 wherein, additionally, at least one monomer compound (D) exhibits at least one hydroxyl group.
- 15. (Original) Microgel according to claim 1 wherein it exhibits an acid number between 10 and 45 mg KOH/g.
- 16. (Original) A method for the production of a coating, comprising applying a dispersion containing an emulsifier-free microgel of claim 1 on a surface of a substrate to obtain a coating.
- 17. (Original) A method according to claim 16 for the production of wherein the coating is a base coat.

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18. (Original) A method according to claim 16, wherein the microgel, is between 20 wt % and 85 wt %, of a solid content of the coating.

- 19. (Original) The method according to claim 16, wherein the microgel is between 20 wt % and 65 wt % of a solid content of the coating.
- 20. (Original) Microgel according to claim 2 wherein the polyacrylate (A) is obtainable by the polymerisation of a monomer (i) with at least one polymerisable double bond and at least one hydroxyl group; of a monomer (ii) with at least one polymerisable double bond and at least one carboxyl group; and of a monomer (iii) without hydroxyl group and without carboxyl group with at least one polymerisable double bond.